

Remarks/Arguments

Reconsideration of this application is requested.

Claim Status

Claims 1-20 were presented. Claims 2 and 11 are canceled, without prejudice, and claims 1, 5, 6, 8 and 13 are amended. Accordingly, claims 1, 3-10 and 12-20 are now pending.

Claim Rejections – 35 USC 102(b) – Matsushita et al.

Claims 1-3 and 8-11 are rejected under 35 USC 102(b) as anticipated by Matsushita et al. (US 4,841,190). In response, independent claims 1 and 8 are amended to clearly distinguish over Matsuhita et al. Claims 1 and 8, as amended, now recite that:

...the terminal pin part is formed from the same material as the stator core and is integrally extended outwardly from the stator core so that the terminal pin part is integrally fixed with the stator core and the thickness of the terminal pin part is the same as the thickness of the stator core..

This is seen, for example, in Fig. 1, where terminal pin parts 71 are integrally formed and protruded from stator core 7 and have the same thickness as stator core 7. This configuration has many advantages. As discussed at page 5 of applicant's specification, for example, with this configuration a coil bobbin for holding a terminal pin is not needed, permitting the size of the stepping motor to be reduced. Also, since the terminal pin part is integrally formed with the stator care, it is of course firmly held to the stator core.

In Matsushita et al., by contrast, terminal pin parts 25 are clearly not integrally formed and extended from a stator core, and do not have the same thickness as the stator core. As noted by the Action, elements 13 and 14 of Matsushita et al. designate the stator core. As clearly seen in Fig. 5, however, and described at col. 3, line 65 to col. 4, line 2 of Matsushita et al., pins 25 are mounted in a support flange on one flange 22 of the bobbin 23 and protrude from its outer

periphery. Thus, pins 25 are not integrally formed with, extended from or fixed to stator core 13 or 14. Moreover, as specifically stated at col. 4, lines 1-2 and easily seen in Fig. 5, the support 26 must have a relatively large thickness relative to pins 25 so that it can firmly hold pins 25. This is in direct contrast to the present invention, where the terminal pin parts *have the same thickness* (and are in fact integrally formed with) the part (the stator core) from which they extend.

Claims 1 and 8 are further amended to clarify that an insulating layer is applied to the terminal pin parts and stator core *by applying a coating*, and that the coil winding is then wound *directly around the coating*. In direct contrast, the resin 40 of Matsushita et al. is applied by injection molding “to cover the coil of the magnet wires 24” (col. 5, lines 35-36). Thus, the layer 40 is formed by injection molding, not coating as is required by claims 1 and 8. Moreover, layer 40 is applied over the coil winding and, thus the coil winding is not wound around the insulation layer as is required by claims 1 and 8.

Since Matsushita et al. does not disclose each and every element of claims 1 and 8, as amended, it cannot anticipate those claims or claims 2, 3 and 9-11 dependent thereon. The rejections of these claims under 35 USC 102(b) should be withdrawn.

Claim Rejections – 35 USC 102(b) – Kato

Claims 5-7, 18 and 20 are rejected under 35 USC 102(b) as anticipated by Kato (US 4,924,124). Independent claim 5, as were claims 1 and 8, is amended to recite that:

...the terminal pin part is formed from the same material as the stator core and is integrally extended outwardly from the stator core so that the terminal pin part is integrally fixed with the stator core and the thickness of the terminal pin part is the same as the thickness of the stator core..

Kato clearly does not disclose, and the Action does not assert that Kato discloses, such a structure. The structure of Kato is not configured such that

terminals 8, 9 and 10 integrally extend from and have the same thickness as a stator core. Thus, claim 5, and claims 6, 7, 18 and 20 dependent thereon, cannot be anticipated by Kato. The rejections of these claims under 35 USC 102(b) should be withdrawn.

Claim Rejections – 35 USC 102(b) – Kobayashi et al.

Claims 1-20 are rejected under 35 USC 102(b) as anticipated by Kobayashi et al. (US 5,239,742). Independent claims 1, 5, 8 (as discussed above) and 13 are amended to recite that:

...the terminal pin part is formed from the same material as the stator core and is integrally extended outwardly from the stator core so that the terminal pin part is integrally fixed with the stator core and the thickness of the terminal pin part is the same as the thickness of the stator core..

Kobayashi et al. clearly does not disclose, and the Action does not assert that Kobayashi et al. discloses, such a structure. Terminals 13 are clearly not integrally extended from and do not have the same thickness as a stator core. Rather, they are “firmly held” by a terminal holder section 62, and clearly have a different thickness than section 62 (see, e.g., Fig. 5). Thus, claims 1-20 cannot be anticipated by Kato. The rejections of these claims under 35 USC 102(b) should be withdrawn.

Claim Rejections – 35 USC 103(a)

Claims 4, 12, 17 and 19 are rejected under 35 USC 103(a) as obvious over Matsushita et al. in view of Kato. Claims 4, 17 and 19 depend directly or indirectly from claim 1, and claim 12 depends from claim 8. As discussed above, neither Matsushita et al. nor Kato, taken alone or in combination, disclose all elements of claims 1 and 8 as amended. Thus, they cannot render obvious claims 4, 12, 17 and 19 which depend from those claims. The rejections of these claims under 35 USC 103(a) should be withdrawn.

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Conclusion

This application is now believed to be in condition for allowance. The examiner is urged to telephone the undersigned to resolve any issues that remain after entry of this amendment. Any fees due with this response may be charged to our Deposit Account No. 50-1314.

Respectfully submitted,
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